THE INTERFACING OF HARDWARE WITH HAWKTOUR - AN APPLICATION OF PERVASIVE COMPUTING, Henry T. Oyuela, Dr. Xian–He Sun*, Illinois Institute of Technology, Department of Computer Science, Chicago, IL 60616, oyuehen@iit.edu

Pervasive Computing is considered the next generation of computing, providing information and communication technology to everyone, in any location, at all times. The concept consists in the development of a "human-centered" computing environment that combines integrated processors, sensors, high-speed network technologies, and intelligent software all in one package. It is a context-aware system, which provides several services through the awareness of the surrounding environment, adapting to the changes that occur with the collection of various forms of information that is consistently obtained with minimal user interaction.

At the Illinois Institute of Technology (IIT) there is current research being performed in the area of Pervasive Computing, with the development of Scarlet, a framework for context-aware computing. Scarlet has been designed to serve as a platform on which several pervasive applications will be developed and eventually be an integral part of a complex pervasive and ubiquitous computing system. Some of its attributes are cross-platform compatibility, scalability, modularity, and extensibility.

The objective of this research project is to interface hardware, specifically large screen televisions, to the current Scarlet system - HawkTour. Enriching the system via a smart environment will thus improve the user's experience. Detecting available hardware is also a key component of pervasive computing: each integrated device serves as a context provider to the Scarlet system. Our long-term goal is to have all applicable environment appliances (such as a TV, computer, vending machine, coffee maker, etc.) be able to talk smartly with the user's portable devices, seamlessly providing the user with more productivity.